

ABSTRACT OF THE DISCLOSURE

A modified kneading element for a screw extruder, peripherally congruent, aligned, and contiguous with a cross-sectional profile of a modified conveying element, includes a central portion defining a root diameter having a shaft receiving bore defined therein; and at least one lobe extending radially from the central portion, each lobe having an outer periphery ridge and first and second lateral sidewalls, wherein one of the lateral sidewalls of each lobe is concave between the outer periphery ridge and the central portion. Kneading blocks including such kneading elements and screw extruders including such kneading blocks are also provided.